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Artificial Intelligence Institute

## AI Governance Roundtable #3: Sustainable Growth with AI

*How should AI governance lay the groundwork for sustainable growth, and not merely short-term gains?*

*This is the **third** of a series of [roundtables](#) convened by AI Singapore for representatives from industry, government, and academia to discuss responsible AI. Such discussions are typically too narrow and too broad. Too narrow in that a few voices dominate the discussion – notably those in the United States and Europe, with China sometimes included. Too broad in that discussion is often limited to generalities and principles. This project aims to address both aspects of this problem, involving a wider set of stakeholders – in particular those from Southeast Asia – in more focused discussions of specific challenges in the application of Responsible AI to particular questions.*

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### Executive Summary.

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Sustainable growth with AI involves meeting present needs while maintaining the ability to continue to do so in the future. Within the context of artificial intelligence (AI), this principle entails ensuring that AI development and deployment does not harm future economic, social, political, or environmental prospects.

The discussion identified a number of challenges pertaining to sustainable growth with, and within, AI:

- **Diverse stakeholders:** Effective AI governance requires collaboration among governments, multinational corporations, MSMEs, and more, which presents a significant challenge due to differing interests and capacities.

- **ASEAN collaboration:** ASEAN countries typically follow regulations set by major players like the US, China or the EU. Strengthening regional cooperation can enhance ASEAN's ability to influence global AI governance and leverage AI for regional benefits.
- **Economic disparities:** Differences in economic structure and AI capacities among ASEAN countries necessitate tailored AI deployment approaches to ensure equitable growth and avoid exacerbating inequalities.
- **MSME adoption:** MSMEs form the backbone of many ASEAN economies, but face barriers to AI adoption. Addressing these through targeted training and accessible AI solutions is crucial for inclusive growth.

These challenges are broad, and touch on many facets of society and politics. Alongside these challenges identified by the discussants, some potential solutions have been proposed:

- **International and regional collaboration: Establishing frameworks for regional cooperation, standardising AI ecosystems and regulatory frameworks, and setting common goals can help bolster regional strength among the ASEAN countries, allow them to navigate global AI governance more effectively,** and maximise regional benefits.
- **Beyond economic impacts:** AI policies should balance economic benefits with social, environmental and ethical considerations, fostering sustainable growth through broad digital transformation.
- **Skills, training & education:** Focused training programmes for MSMEs and broader educational initiatives can drive AI adoption across diverse sectors, ensuring inclusive economic growth.
- **Democratising AI benefits:** Promoting application-first AI deployment can democratise its benefits, empowering local stakeholders to use AI solutions tailored to their needs.

Future discussions and research should explore practical frameworks for ASEAN cooperation, how to reconcile local needs with global AI trends, and prioritise diverse stakeholder engagement to achieve sustainable AI-driven growth.

Achieving sustainable growth through AI requires a multifaceted approach, with targeted & intentional policy initiatives, to balance long-term economic growth with societal, political, and environmental sustainability. The success of such initiatives in ASEAN will depend on effective regional collaboration, inclusive policies, and robust training programmes. By ensuring AI benefits are widely distributed, future risks are most effectively mitigated.

## Introduction.

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The emergence of artificial intelligence (AI) has promised to bring substantial change to societies. Some good, some bad, and some neither. Nonetheless, all of these changes need to be considered and prepared for. [In our previous reports](#), based on roundtables organised by AI Singapore, we outlined discussions on AI responsibility. As these systems become more complex, allocating responsibility between developer, deployer, and user becomes an essential aspect of managing risk. This calls for a collaborative approach to AI development that will require continuous engagement and actions taken throughout the AI lifecycle, such as quality control measures, limitations on deployment, and other forms of external regulation. Another report has discussed the question of transparency/explainability. Given AI's revolutionising capacity as decision-makers, transparency and explainability become central to upholding ethical standards in the sector. Yet, how organisations and corporations operationalise transparency and explainability differs from use-case to use-case; there is no one-size-fits-all. This question calls for an audience-centric approach, whereby transparency and explainability differ based on *who* it needs to be transparent towards. These are regulatory standards that have yet to be set.

This third report will take a step back from these questions and instead focus on deployment, specifically *how AI can be deployed responsibly to create sustainable growth*. It is no secret that AI solutions can help supercharge economies, but questions of economic growth are not the only ones important to ask. Given that AI is likely to be a game-changer in most, if not all, industries and use cases, responsibly deploying and using AI requires both long-term and lateral thinking beyond matters of the economy. Only through a responsible deployment can AI's economic impact lead to sustainable growth.

### 1.1 What is sustainable growth?

In broad terms, sustainable growth entails meeting present needs without jeopardising future generations from meeting their needs. [This principle is best exemplified by the UN sustainable development goals](#). Within the context of artificial intelligence, the application of this principle becomes narrower: to use AI to meet present needs without risking or undermining the capacity for the same in the future. Among the various meanings used in this report, it can mean long-term viability as an economic enterprise; specifically concerning the environmental impact of AI—both in its development, and its deployment as a means to help solve environmental challenges potentially; pertaining to questions of social and economic justice, whether across the gender divide, socioeconomic strata, other such categories, or a mix of several. Sustainable development in AI, therefore, can be summarised more specifically to entail sharing both risks and benefits equitably across different levels of stakeholders in society.

These stakeholders change significantly depending on scale: from governments and countries, to multinational corporations, to individual people, as well as overarching political risks. In other words, the matter at hand is broad, and though this report will focus predominantly on matters pertaining to sustainable economic growth—how to equitably share both the economic opportunities and challenges brought about by AI—the wide lens cannot be wholly dropped. Developments, deployment, and applications in one country cannot be considered in a vacuum; what affects one place invariably will affect its neighbours. As the following report will discuss, and as was made amply clear during the discussions, international & regional cooperation, coordination, and combined efforts will be crucial.

## 1.2 Taking responsibility further.

When discussing ‘responsible AI’, much focus is placed on responsible development: are the developers thinking critically about the training data? Is the model created in tandem with a comprehensive set of stakeholders? Does it take data privacy seriously? These are, no doubt, important questions—as discussed at the previous roundtables. Yet, there is a need to widen the definition of responsibility further, to take a step away from responsible AI development and move towards responsible AI deployment. To achieve sustainable growth with AI, AI must be deployed responsibly.

Therefore, alongside discussing responsible development, there must also be a discussion about responsible use cases. What does it mean for societies to deploy AI? Are there any areas where AI should not be deployed, or should it be deployed differently? Furthermore, its economic impacts are likely to be as sweeping as there are diverse economies across ASEAN. It is crucial that the use of AI allows for their gains to fall not just to large, multinational corporations (MNCs), but also to micro-, small-, and medium-sized enterprises (MSMEs).

## 1.3 The many guises of sustainability.

Sustainably deploying AI is inherently multifaceted. Sustainability, in this case, certainly encompasses economic sustainability, and sustainable growth, which inherently relates to social and political sustainability—as clearly seen in concerns over rising unemployment, or the spread of misinformation. However, this process cannot be divorced from environmental or ecological sustainability, either. The vast resources used both to build the infrastructure needed and the gargantuan energy needs of said infrastructure make this, equally, a matter of environmental sustainability.

Any discussion of the responsible or sustainable deployment of AI cannot be divorced from a much broader context. It is an enormously large topic that cannot be wholly covered in one roundtable. Yet, any discussion must begin somewhere.

## 2 Understanding the Problem.

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Based on the above outline of the multifaceted nature of responsible AI deployment as a way towards achieving sustainable growth, the roundtable discussions identified four primary challenges: a wide range of stakeholders, international collaboration, diverse economies, and AI adoption among MSMEs. These are outlined below, followed by a discussion of potential solutions.

### 2.1 Wide range of stakeholders.

Matters of responsibility and sustainability in AI development and deployment have, until recently, been relegated to a comparably small—and limited—ground of people. Ethicists, policy researchers, and other subject matter experts have been discussing these questions for a long time, but these have often focused much more on abstract scenarios. Such abstractions do not always translate well or effectively when applied to reality, as reality is much more complex than models. This is true for most discussions pertaining to AI governance. Still, the question of deployment arguably casts the widest net in terms of potential stakeholders.

Stakeholders in this context run the gamut from governments to large international corporations, to local contexts, such as smaller businesses and business owners, down to individuals. Furthermore, given the potentially significant and high-level impact of these developments, regional bodies for cooperation and coordination such as ASEAN become essential arenas for meeting oncoming challenges, and maximising potential benefits.

Yet, bringing such a diverse set of stakeholders together is a core challenge for responsible AI deployment. Due to their diversity and competing interests, finding widely acceptable solutions will be a recurring challenge.

### 2.2 The ASEAN ecosystem & international collaboration.

Regarding broader AI policy and governance, ASEAN countries will typically be ‘rule-takers’ and not ‘rule-makers’, forced to navigate the regulations adopted by China, the United States and the European Union. This is true not just on national levels but also about ‘big tech’ entities, especially those of a certain size, like those dominating the AI space today. This risks limiting the capacity of ASEAN countries to set their limitations, direct use cases based on local particularities, and prioritise regional needs.

Yet, ASEAN’s bargaining power could be strengthened substantially with inter-regional cooperation and the creation of a wider ASEAN ecosystem for AI companies, start-ups, and regulations. With shared regional governance platforms, ASEAN could be strong enough to withstand regulatory changes better elsewhere while also being able to influence global agreements more effectively.

Furthermore, regional governance platforms are an integral part of regional collaboration and coordination. Not least to ensure a unity of purpose and approach to sustainability-related issues. Issues with mobility for research and development staff are a prime example of how such regional frameworks can help strengthen the region's standing as a whole. Due to uneven visa requirements, unnecessary intra-regional competition is introduced, weakening the capabilities and potential of a regional ASEAN AI ecosystem.

### 2.3 Diverse economies in diverse societies.

Though shared regional frameworks will be essential to harness ASEAN's potential within the AI space, there remain substantial differences between the ASEAN nations, especially regarding current capacities, future concerns, and the overall structure of the economy. Singapore, for example, is deeply concerned with the potential misuse of AI—such as spreading disinformation—whilst some other countries in the region are worried about *missed uses* of AI. Responsible and sustainable AI deployment looks different in different countries, and in some cases, these differences can be substantial. Though this fact does not preclude international collaboration (indeed, it could be said that it strengthens the case for more cooperation), it again foregrounds the challenge of a large set of very diverse stakeholders that go beyond nation-states.

Though large corporations have been leading within the AI space thus far, responsible and sustainable deployment of AI's capacities must ensure that benefits are equally distributed across the economy and not concentrated in a few companies or sectors in the economy. Indeed, the potential benefits of AI deployment reach far beyond just economic growth, and so do its risks: economic, social, and environmental are those most often talked about, but also for diversity, equality and inclusion (DEI), as with the capacity to allow more women into the workforce. Yet, wide deployment of AI can also lead to colossal labour disruption, especially if a 'tech-first' approach is favoured. Rather, upskilling and reskilling—a 'skills-first'—approach will likely be necessary not just to avoid labour disruption, but perhaps more importantly to ensure that AI deployment across more sectors than just tech or finance.

In other words, sustainable digital transformation must necessarily involve a multitude of stakeholders and local particularities and contexts. It needs to include local people who understand and can thus solve local problems.

### 2.4 MSMEs and AI adoption.

[Within a local ASEAN context, MSMEs account for 97% of the region's private sector, 85% of the labour force, 45% of regional GDP, and 10-30% of exports.](#) In other words, sustainable growth can only be achieved by giving serious thought to how this impacts these businesses. Yet, these companies need to invest or engage more with AI technologies. A digital divide risks emerging as a result. There needs to be a more precise value proposition with AI for these businesses, especially when labour in the region remains cheap. There is also often an

inherent resistance to change. This issue is exacerbated when much of the public discussion, communication, and training frames AI as a risk to be managed first and foremost, such as database management or data privacy regulations, as foregrounded by some roundtable participants. Instead, a clear value proposition and clear use cases must be provided, which do not require a complete overhaul of business operations. AI must be adjusted for the relevant scales: micro, small, and medium.

As mentioned above, training and upskilling can also be crucial in increasing MSME adoption. Many small-scale entrepreneurs need more relevant training, meaning that relatively easy-to-use AI solutions still need to be put in reach. This is less a question of regulation and more one of education. Learning and skills development are crucial, but so is providing MSMEs with the right toolkit, such as easy-to-use end-to-end solutions and clearly communicated best practices. In essence, the value of AI adoption needs to be placed front and centre.

### 3 Possible Solutions

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Considering the challenges facing responsible AI deployment outlined above, the roundtable discussion explored several solutions that could counteract and overcome these challenges.

#### 3.1 International & regional collaboration.

Establishing effective and deep frameworks of international collaboration is an enormously complex affair that, more than anything, requires time to be negotiated and effectively implemented. Therefore, any work towards practical international cooperation will take a long time to emerge, such as high-level agreements on use-case bans or limitations on a global scale, shared definitions, or more general framework under international law. Many of these developments will be crucial in the long term, but, as noted, they are likely to take a long time. However, other solutions are better suited to emerge on a regional level. Though regional coordination and cooperation are equally complex, such as shared trade agreements or visa requirements/restrictions, early groundwork can already be laid today to facilitate subsequent frameworks and agreements.

Such early groundwork should target common goals and work to standardise the AI ecosystem within ASEAN. Though different economies have different needs and capabilities, concerns and challenges, establishing common direction, standardised definitions, and frameworks for sharing information, knowledge and technologies, as well as clear pathways for how talent can effectively and quickly carry out cross-border work within the ASEAN region. Furthermore, establishing broader governance and regulatory agreements—such as the off-limit deployment of AI (e.g. misinformation)—will also help the countries in the region, despite their heterogeneous economic and societal structures, pull in the same direction. A shared direction for AI deployment will be crucial for future collaboration among the ASEAN nations.

### 3.2 Moving beyond the economy.

Though AI's potential is often spoken to in economic terms, responsible deployment of AI must look beyond merely its economic impacts, and towards a more holistic approach. In other words, countries need to be intentional about their policies, carefully weighing benefits and risks while avoid letting hype (whether positive or negative) guide their decision-making process. Countries need to create sustainable digital transformation. Indeed, economic factors—equality, potential labour market disruption, and whole new industries and markets—are part of such a transformation. However, discussions around DEI ensure a diversity of applications in a wide range of sectors: taking local contexts into considerations; solving local problems—be they economic, social, ecological, or something else entirely—with local knowledge, and likely to much more significant long-term effect.

Furthermore, whilst this all focuses on potential risks—inequality, disruption, or communities of people 'left behind'—sustainable digital transformation must also consider the positive use cases that AI can facilitate: new healthcare solutions, more effective resource handling, or improved logistical solutions. These examples here are very vague, as a core principle that must be embraced here is that of local problems, local needs, and local people that can best understand these particularities and find the best solutions. An example is how Indonesian fisher and shrimp farmers have embraced AI to increase their yields whilst ensuring environmental sustainability by [avoiding overfishing and monitoring water quality](#).

### 3.3 Skills, training, education.

Though the AI ecosystem is currently dominated by MNCs, effectively deploying AI solutions requires substantial uptake among the general population, particularly MSMEs. It is often said that training and education are vital in ensuring such an uptake—this is, of course, true, but it is essential to consider what *kind* of training and up/reskilling is required. Shifting, on the one hand, training programmes to more carefully target the needs of MSME owners in ASEAN, presenting them with out-of-the-box solutions and clear pathways for best practices will be crucial. In other words, to move beyond the top-level discussions often had by academics and thought leaders, to speak to the needs of the people using AI clearly.

Through educational programmes, clear communication, and a straightforward value proposition, ensuring that AI is deployed across as many sectors of the economy and socioeconomic strata as possible forms a central tenant for any responsible AI deployment strategy. However, it must be noted that the starting point differs across sectors and across different countries within ASEAN, and they will thus face different challenges even within the same sectors.

### 3.4 Distribution of benefits (moving beyond platform dominance).

Returning to the beginning of this report, AI and its governance are typically thought of in technical terms and capacities. This risks a tech-first approach, where the development of the technology stipulates its applications. For a sustainable and responsible AI deployment framework to emerge effectively, its deployment must follow an ‘application-first’ approach, where AI deployment presents a solution to genuine problems and challenges people face. Part of the solution here is to work to end platform dominance, and to democratise the industry and its nascent ecosystems, allowing people the opportunity to access and use these technologies as they see fit, and as they need them.

## 4 Next Steps

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AI deployment and its development are still nascent, and corporations, states, and individuals are still exploring its potential use cases. It is a fast-moving space. Though discussing responsible AI deployment in practical terms becomes a challenge in itself, as much of *how* AI will be deployed lies in the future, and likely, in many cases, soon. Yet, whilst practical examples might, for the moment, be comparably limited, this roundtable discussion has managed to foreground several principles for how to best engage with these use cases as they emerge. These cannot be discussed in exhaustive detail here, and instead raise questions and areas for future research:

- (1) How can rule-takers best navigate conflicting interests between local and international actors? How can local needs be reconciled with global demands?*
- (2) What are the practical next steps for policymakers to bring the ASEAN region closer together in cooperation on responsible AI development and deployment?*
- (3) What are the timelines or time limits for these processes? How can policymakers and regulators best prioritise this diverse set of challenges?*

## 5 Conclusions

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Getting economic growth from AI will probably not be a significant challenge—short-term gains will be easy enough to come by. It is long-term, sustainable growth that will present more of a challenge. Yet, this long-term growth, resulting from a long-term digital transformation strategy, will be essential to counteracting many risks and issues stemming from AI deployment. Labour-market shocks, undermining social and political institutions, and increased environmental impacts from the large quantities of energy AI-related infrastructure requires are all problems that need to be navigated around, and in some cases through.

Multifaceted challenges call for equally multifaceted solutions, stemming from increased international collaboration—in this context, especially within the ASEAN region—to align a disparate set of actors towards a similar goal. Encouraging the uptake of AI solutions outside of MNCs and the tech or finance industries will be another crucial factor in democratising AI, by having people use the tools in local contexts; to solve local solutions with local knowledge. This cannot be achieved without a robust training network that allows people to reskill or upskill. The success of such an endeavour in the ASEAN region will, in the long-term at least, be contingent on the success of a region-wide AI ecosystem that ties together a wide array of stakeholders. It is a challenge, but one will prove worth it once it is achieved.

**Funding:** This roundtable was founded via a charitable grant from [Google.org](https://www.google.org), as part of Google's [Digital Futures Project](#).

